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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BHATNAGAR, ANAND P

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,336

Applicant(s)

ITO ET AL.

Examiner

Anand Bhatnagar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-26 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 15-26 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02/22/05&09/28/01.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

1. Applicant's amendment filed on 02/22/05 has been entered and made of record.
2. Applicant has canceled all the original claims (1-14) and replaced them with 12 new claims (#15-#26). Currently, claims 15-26 are pending.

DETAILED ACTION

Claim Objections

3. Claim 23 is objected to because of the following informalities: It depends from claim 7, which has been canceled. Examiner believes that applicant meant to have it be dependent from claim 21 and will treat it as such. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18- 20 and 24-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claims 18 and 24: Examiner is unsure if an image has been divided into regions in order to compare corresponding regions between images since there is no step of an image being separated into regions. This claim is vague and indefinite.

Claims 18 and 24 recites the limitation "each one of predetermined regions." There is insufficient antecedent basis for this limitation in the claim. Examiner will address these claims as best understood.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Florent (U.S. patent 5,406,501).

Regarding claims 15, 18, 21, and 24: An object detecting method for detecting an object in an image obtained from an image pickup means, comprising;

a frame subtraction step of executing frame subtraction processing between an input image from the image pickup means and respective ones of a plurality of images each having a different time interval with respect to said input image (abstract, table 1, col. 2 lines 59-67, and col. 4 lines 1-35);

a synthesizing step of adding together differential data obtained by said frame subtraction processing based on coefficients which are set for respective ones of predetermined regions of the image (abstract and col. 3 lines 1-13,

wherein the intensities of the differential images are summed and the values of the intensities are read as the coefficients); and

an object detecting step of detecting an object based on data obtained from said synthesizing step (abstract, col. 1 lines 9-13, and col. 3 lines 14-22).

Florent discloses a moving object detecting system wherein obtained images are first processed to obtain differential images, then the data in these differential images is summed, followed by detection of moving objects. Florent does not teach to obtain differential images wherein the input image is used as one of the images and the respective ones of a plurality of images and also does not teach the different time interval of the images. Setting the images is a matter of design choice such as wherein a template/background image (which can be the first input image or any other image in a sequence of images) may be used to obtain differential images from a sequence of images, different interval images may be used for obtaining differential images, etc. since any obtained differential image(s) will result in the detection of moving object, if one exists, in the sequence of images because there will be a difference in the data. Further, using specific set time intervals or random/different time intervals is also a matter of design choice since any differential images obtained at any time interval(s) will give a difference in image data, i.e. detection of a moving object, if one exists.

Regarding claims 16, 19, 22, and 25: An object detecting wherein said coefficients are set based on a distance from the image pickup means. Florent discloses to obtain the intensity differences between images to detect a moving

object in a sequence of images. It is inherent that the intensities in the images are based on many factors such as the amount of illuminance, the reflectance of light off the object, the distance of the camera/imaging means to the object(s), the motion of the object since reflectance changes with object profiles, etc.

Regarding claims 17, 20, 23, and 26: An object detecting method wherein said coefficients are set based on a magnitude of movement of an object in a respective one of predetermined regions of said image. Florent discloses to obtain the intensity differences between images to detect a moving object in a sequence of images. It is inherent that the intensities in the images are based on many factors such as the amount of luminance in the image, the reflectance of light off the object, the distance of the camera/imaging means to the object(s), the motion of the object since reflectance changes with object profiles, etc.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory

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period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand Bhatnagar whose telephone number is (571) 272-7416, whose supervisor is Jingge Wu whose number is (571) 272-7429, Central fax is 571-273-8300, and Tech center 2600 customer service office number is 703-306-0377.

AB

Anand Bhatnagar

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September 18, 2005


VIKRAM BALI
PRIMARY EXAMINER